

# COUNTRY ANALYSIS BRIEFS

## Malaysia

Last Updated: February 2006

### General Background

**Malaysia's rate of economic growth** slowed in 2005, with real gross domestic product (GDP) expanding by 5.3 percent, down from 7.1 percent in 2004. The slowdown was largely due to a drop in the rate of growth of the country's exports, particularly semiconductors and consumer electronics items. Real GDP growth for 2006 is forecast at 5.5 percent.



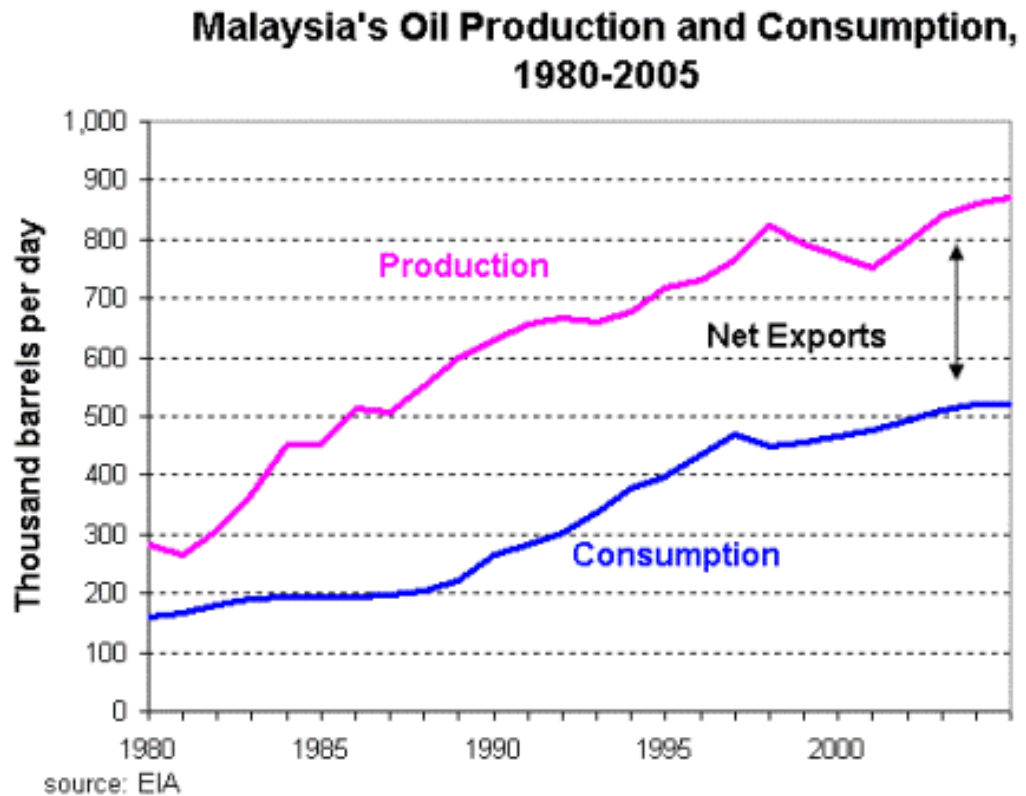
Malaysia's banking system has been stabilized, after being undermined by a high proportion of nonperforming loans during the Asian financial crisis of 1997-98. The country's banking sector went through a major restructuring in 2000, with many weaker financial institutions being taken over by stronger ones. In order to stimulate the economy, the country's government increased spending sharply in 2001, but in 2003-2004 began to reduce its government budget deficit, though some deficit spending is likely to continue for another several years. With its high current account surplus, equal to about 12 percent of GDP, Malaysia has been reducing its foreign debt, and may become a net creditor around the end of the current decade.

Malaysia has maintained its policy of a fixed exchange rate between the ringgit and the U.S. dollar. The fixed rate was imposed by Prime Minister Mahathir in September 1998 as part of capital controls designed to stem the outflow of short-term capital in the wake of the Asian financial crisis. Malaysia's currency is considered somewhat undervalued at the present exchange rate of 3.8 ringgits to one U.S. dollar. In 2001, some of the capital controls imposed in 1998, such as the taxes on repatriation of short-term stock market profits by foreign portfolio investors, were relaxed.

Prime Minister Mahathir Muhammad stepped down in October 2003 after over two decades in office. Abdullah Ahmed Badawi, who had previously served as Deputy Prime Minister, succeeded him.

### Oil

**Despite declining reserves, Malaysia's oil production has grown in recent years, mainly due to development of new offshore fields.** Malaysia contains proven oil reserves of 3.0 billion barrels, down from a peak of 4.3 billion barrels in 1996. Despite this trend toward declining oil reserves, Malaysia's oil production has been rising since 2002 as a result of new offshore development. In 2005, the country's total oil production averaged 871,000 bbl/d, up from an average of 860,000 bbl/d in 2004. Natural gas liquids production contributed 84,000 bbl/d of that amount in 2005. Malaysia's oil demand has been growing at a much slower rate than its economic output, due largely to the conversion of oil-fired power plants to natural gas.



As a result of the long-term trend toward declining oil reserves, Petronas, the state oil and gas company, has embarked on an international exploration and production strategy. Currently, Petronas is invested in oil exploration and production projects in Syria, Turkmenistan, Iran, Pakistan, China, Vietnam, Burma, Algeria, Libya, Tunisia, Sudan, and Angola. Overseas operations now make up nearly one-third of Petronas revenue. The majority of Malaysia's oil exports go to markets in Japan, Thailand, South Korea, and Singapore.

Malaysia's domestic oil production occurs offshore, primarily near Peninsular Malaysia. Most of the country's oil fields contain low sulfur, high quality crude. More than half of the country's oil production comes from the Tapis field, which contains a light grade of crude oil with a low sulfur content. Esso Production Malaysia Inc. (EPMI), an affiliate of ExxonMobil Corporation, is the largest crude oil producer in Peninsular Malaysia, accounting for nearly half of Malaysia's crude oil production. EPMI operates seven fields near the peninsula, with one-third of its production coming from the Seligi field. The Seligi-F platform, with its 28 wells, is the newest satellite in the Seligi field, located 165 miles off the coast of Terengganu, Peninsular Malaysia. EPMI holds a 78% interest in the project with Petronas Carigali holding the remaining 22%. EPMI began production from the offshore Larut field in Block PM5 in early 2002, which has reached peak production of 140,000 bbl/d, offsetting some of the production declines in more mature fields in recent years.

In other developments, Sabah Shell Petroleum Company, a unit of Royal Dutch/Shell Group, has raised production at the Kinabalu field to 36,000 bbl/d, plus 28 million cubic feet per day (Mmcf/d) of natural gas. Production at Kinabalu, located in the SB-1 block 34 miles off the coast of Labuan, Sabah in east Malaysia, began in December 1997. As operator of the SB-1 block, Shell holds an 80 percent stake in the block, with Petronas holding a 20 percent stake. Shell reported two new discoveries offshore from Sabah in 2004, Gamusut-1 in March and Malikai-1 in September. Gamusut-1 lies in deep waters which are the subject of a territorial dispute with Brunei. Both finds are still under evaluation, but are expected to yield significant reserves. Shell also was awarded exploration rights to Blocks ND6 and ND7 offshore from eastern Sabah in February 2005, in an area disputed by Indonesia. Both

countries deployed additional military forces to the area in the spring of 2005, and also have been in negotiations aimed at resolving the dispute.

In February 2000, Sweden's Lundin Oil announced that it had signed a sales agreement with Petronas and PetroVietnam which will allow it to proceed with development of its long-delayed Bunga Kekwa project. Production has now reached a peak of 40,000 bbl/d. Lundin Oil is the operator of the field, and Petronas and PetroVietnam hold equity stakes in the project. PetroVietnam, Pertamina of Indonesia, and Petronas concluded an agreement in June 2003 for joint exploration of Block SK305 offshore from Sarawak.

Murphy Oil reported a sizable new find in August 2003 at Kikeh, in Block K offshore from Sabah. Exploratory drilling in the area continues, and Murphy Oil has set a target of 2007 for commercial production. This will be Malaysia's first deepwater oil production. Murphy Oil was awarded two new exploration areas in January 2003, Blocks L and M, adjacent to Block K. Another adjacent area, Block P, was awarded to Talisman in January 2006. Murphy has reported several new successful wells in these areas in 2004 and 2005, as well as one in shallow waters near peninsular Malaysia, Kenarong-1. Canadian independent Talisman Oil reported a new find in Block PM305 in shallow waters offshore from peninsular Malaysia in May 2003, which began commercial production in August 2005 at about 12,000 bbl/d. Talisman received an award for additional exploration acreage adjacent to its existing block in June 2005.

### Refining & Downstream

Malaysia has six refineries, with a total processing capacity of 544,832 bbl/d. The three largest are the 155,000-bbl/d Shell Port Dickson refinery and the Petronas Melaka-I and Melaka-II refineries, which have a capacities of 92,832 bbl/d and 126,000 bbl/d, respectively.

The second phase of the \$1.4 billion, 200,000-bbl/d Melaka refinery complex, located about 90 miles south of Kuala Lumpur, commenced operations in August 1998. The 100,000-bbl/d Melaka-II second phase is a joint venture between Petronas (45%), Conoco (40%), and Statoil (15%). This second refinery contains a 62,000-bbl/d vacuum distillation unit, 26,000-bbl/d catalytic cracker, 28,500-bbl/d hydrocracker, 35,000-bbl/d desulfurization unit, and 21,000-bbl/d coker. One of the main purposes of this refinery is to supply gasoline to Conoco's service stations in Thailand and a new line of stations planned for Malaysia. The first phase of the Melaka refinery was finished in mid-1994 and consisted of a 100,000-bbl/d sweet crude distillation unit, which is wholly owned by Petronas and processes Tapis crude oil.

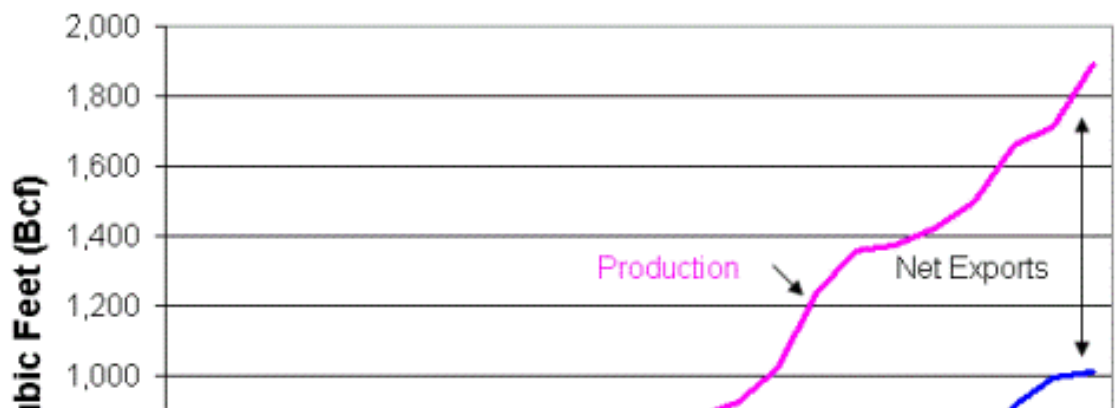
BP sold a 70 percent stake in its network of retail outlets in Malaysia to local investment company Boustead Holdings in February 2005. BP Malaysia has 245 branded retail outlets.

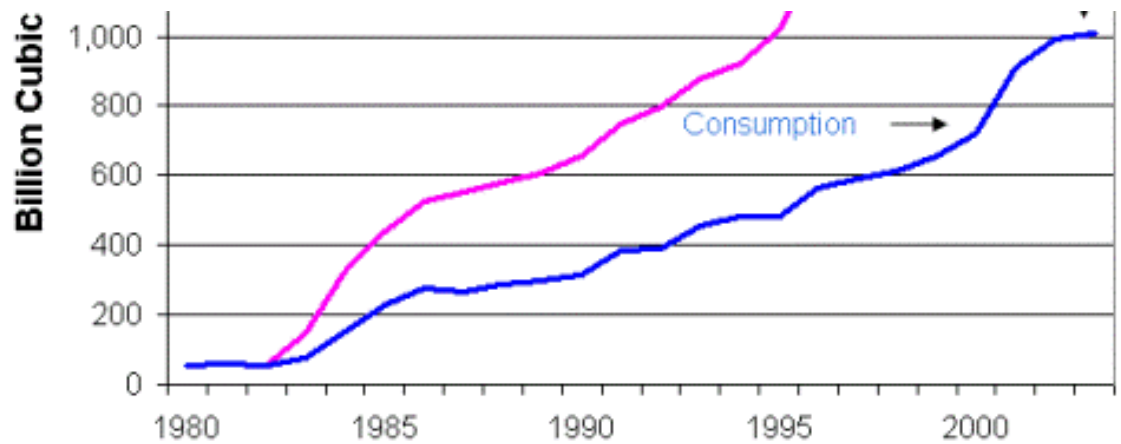
With the rapid rise in crude oil prices over the last two years, Malaysia's subsidized prices for retail petroleum product sales have become quite costly for the country's government.

## Natural Gas

**Malaysia's natural gas exports continue strong growth.** Malaysia contains 75 trillion cubic feet (Tcf) of proven natural gas reserves. Natural gas production has been rising steadily in recent years, reaching 1.9 Tcf in 2003. Natural gas consumption in 2003 was estimated at 1.0 Tcf, with LNG exports of around 0.9 Tcf (mostly to Japan, South Korea, and Taiwan).

**Malaysia's Natural Gas Production and Consumption, 1980-2003**





One of the most active areas in Malaysia for gas exploration and development is the Malaysia-Thailand Joint Development Area (JDA), located in the lower part of the Gulf of Thailand and governed by the Malaysia-Thailand Joint Authority (MTJA). The MTJA was established by the two governments for joint exploration of the once-disputed JDA. The JDA covers blocks A-18 and B-17 to C-19. A 50:50 partnership between Petronas and Amerada Hess is developing block A-18, while the Petroleum Authority of Thailand (PTT) and Petronas also share equal interests in the remaining blocks.

PTT and Petronas announced an agreement in November 1999 to proceed with development of a gas pipeline from the JDA to a processing plant in Songkla, Thailand, and a pipeline linking the Thai and Malaysian gas grids. Malaysia and Thailand will eventually each take half of the gas produced, though initial production will go just to Malaysia. The project had been controversial in Thailand, facing opposition from local residents in Songkla along the pipeline route. In May 2002, the Thai government announced a final decision to commence construction on the project later that year, though the pipeline route was altered slightly to avoid some populated areas. Deliveries of natural gas into Malaysia began in the first quarter of 2005, with deliveries into Thailand scheduled to begin in 2006. A sales agreement for natural gas from the other jointly-held blocks was signed in June 2005, with deliveries to Thailand of 270 MMcf/d beginning in 2008.

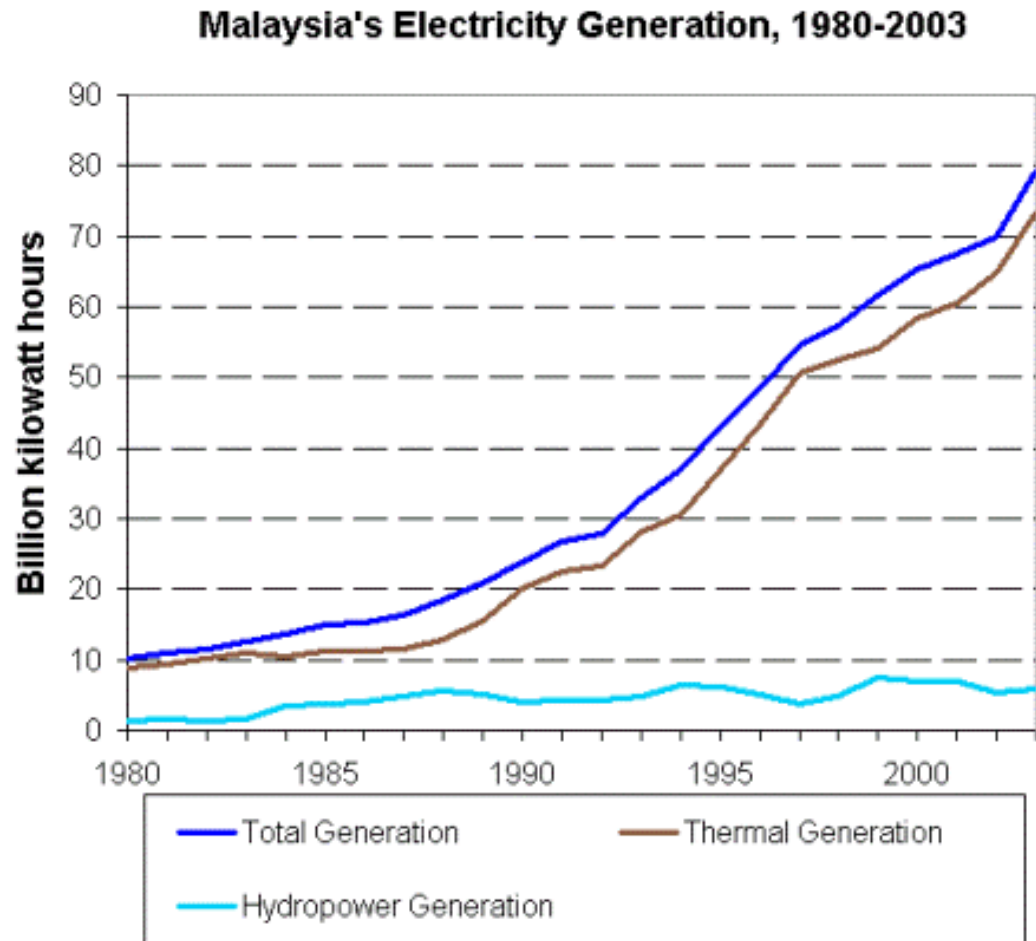
ExxonMobil produces about 335 Mmc/d at its offshore Bintang natural gas field in the South China Sea, which contains about 1 Tcf of proven reserves. Commercial production at Bintang began in February 2003.

Malaysia accounted for approximately 16% of total world LNG exports in 2004. After much delay, Malaysia is proceeding with a long-planned expansion of its Bintulu LNG complex in Sarawak. In February 2000, Petronas signed a contract with a consortium headed by Kellogg Brown and Root for construction of the MLNG Tiga facility, with two LNG liquefaction trains and a total capacity of 7.6 million metric tons (370 Bcf) per year, which was completed in April 2003. The Bintulu facility as a whole is now the largest LNG liquefaction center in the world, with a total capacity of 23 million metric tons (1.1 Tcf) per year. Most of the production from the new LNG trains will be sold under term contracts to utilities in Japan. Tokyo Electric Power (TEPCO), Tokyo Gas, and Chubu Electric all import LNG from the project. BG signed a contract in August 2004 for supplies over a 15-year period to the United Kingdom, to begin in 2007 or 2008. Shell brought two additional fields online in 2004, Jintan in March, and Serai in September, both of which feed into the Bintulu export terminal. The two fields added over 1 Mmc/d to Malaysia's gas production.

In addition to LNG, Malaysia exports 150 million cubic feet per day (Mmc/d) to Singapore via pipeline. Surprisingly, Malaysia also is an importer of gas from Indonesia. Petronas signed an agreement in April 2001 with Indonesia state oil and gas company Pertamina for the import of gas from Conoco's West Natuna offshore field in Indonesian waters. The move is being seen as part of a Malaysian strategy to become a hub for Southeast Asian natural gas integration. Deliveries from the pipeline commenced in mid-2003. The pipeline connects to an existing pipeline from the shore to Malaysia's offshore Duyong field, helped to minimize construction costs.

## Electricity

**Malaysia is promoting coal as a fuel of choice for power generation, to free up more natural gas for export.** Malaysia has approximately 16 gigawatts (GW) of electric generation capacity, of which 87% is thermal and 13% is hydroelectric. In 2003, Malaysia generated around 79 billion kilowatt hours of electricity. The Malaysian government expects that investment of \$9.7 billion will be required in the electric utility sector through 2010. Much of that amount will be for coal-fired plants, as the Malaysian government has adopted a policy of attempting to reduce the country's heavy reliance on natural gas for electric power generation.



The largest thermal project under development in Malaysia is the 2,100-MW coal-fired Tanjung Bin project in Johor province. Sumitomo was awarded a \$1.5 billion contract in early 2003 by SKS Power, a Malaysian IPP, for the construction of three 700-MW generating units at the site, with the first unit scheduled to begin commercial operation in August 2006.

In 1994, the Malaysian government granted approval for the massive 2.4-GW Bakun hydroelectric project in Sarawak. Scheduled for completion in 2002, the Bakun Dam had been slated to send 70% of its generated power from Sarawak to Kuala Lumpur through the construction of 415 miles of overhead lines in eastern Malaysia, 400 miles of submarine cables, and 285 miles of distribution infrastructure in Peninsular Malaysia. In addition, expansion plans included a high voltage line south to Johor Baharu and north to Perlis, near the western Thai border. A local company, Ekran, was awarded a turnkey contract to manage the project in January 1995. In 1996, the construction contract went to Sweden's Asea Brown Boveri (ABB). However, in early September 1997, the Malaysian government announced that it was delaying the project indefinitely, citing an unexpected rise in the dam's cost due to the country's economic difficulties at the time.

In mid-1999, work resumed on the river diversion tunnels, a major component of the project, which has since been completed. The Malaysian government has taken control of the project and negotiated financial settlements with the firms involved. The subsea transmission line concept has been abandoned, and the Malaysian government is exploring the possibility of sales of electricity to Brunei and Indonesia. While it had appeared likely that the project would be scaled back from its 2,400-MW capacity, the Malaysian government announced in February 2001 that it



had decided to complete the project on its original scale. Bids were received in July 2002 for the main construction work for the dam, and a construction contract was awarded to a consortium of six Malaysian and Chinese companies in March 2003. Current plans call for the 300-MW generating units to be brought online in stages, with the first capacity to come online in 2007. While electricity demand in Sarawak is modest (currently under 1 GW), the potential to use the electricity to develop a metal smelting industry in Sarawak is largely behind the renewed interest in the project.

Malaysia is considering reforms to its power sector to make it more competitive and lower costs. Currently, three state-owned utilities dominate power generation and distribution in Malaysia. The market was opened to independent power producers (IPPs) in 1994, and 15 IPPs were licensed, though not all of the projects have been built.

Tenaga Nasional Bhd, the main state-owned utility, began in 1999 to divest some of its power generation units. Eventually, Malaysia expects to achieve a fully competitive power market, with generation, transmission, and distribution decoupled, but reform is still at an early stage and the exact process of the transition to a competitive market has not been decided. The issue is still under study, and many observers have voiced caution in light of the experiences of other deregulated utility systems.

## Profile

### Country Overview

<b>Head of Government</b>	Abdullah Ahmad Badawi
<b>Location</b>	Southeastern Asia, peninsula bordering Thailand and northern one-third of the island of Borneo, bordering Indonesia, Brunei, and the South China Sea, south of Vietnam
<b>Independence</b>	31 August 1957 (from UK)
<b>Population (2005E)</b>	23,953,136
<b>Languages</b>	Bahasa Melayu (official), English, Chinese dialects (Cantonese, Mandarin, Hokkien, Hakka, Hainan, Foochow), Tamil, Telugu, Malayalam, Panjabi, Thai note: in addition, in East Malaysia several indigenous languages are spoken, the largest are Iban and Kadazan
<b>Religion</b>	Muslim, Buddhist, Daoist, Hindu, Christian, Sikh; note - in addition, Shamanism is practiced in East Malaysia
<b>Ethnic Group(s)</b>	Malay 50.4%, Chinese 23.7%, Bumiputera 11%, Indian 7.1%, others 7.8% (2004 est.)

### Economic Overview

<b>Minister of Industry</b>	Rafidah Aziz
<b>Currency/Exchange Rate (1/30/2006)</b>	\$1=3.85 ringgit
<b>Inflation Rate (2005E)</b>	3.0%
<b>Gross Domestic Product (2005E)</b>	\$131.2 billion
<b>Real GDP Growth Rate (2005E)</b>	5.6%
<b>Unemployment Rate (2005E)</b>	3.6%
<b>External Debt (2005E)</b>	\$46.1billion
<b>Exports (2005E)</b>	\$139.3 billion
<b>Exports - Commodities</b>	electronic equipment, petroleum and liquefied natural gas, wood and wood products, palm oil, rubber, textiles, chemicals
<b>Exports - Partners (2004E)</b>	US 18.8%, Singapore 15%, Japan 10.1%, China 6.7%, Hong Kong 6%, Thailand 4.8%
<b>Imports (2005E)</b>	\$108.2 billion
<b>Imports - Commodities</b>	electronics, machinery, petroleum products, plastics, vehicles, iron and steel products, chemicals
<b>Imports - Partners (2004E)</b>	Japan 16.1%, US 14.6%, Singapore 11.2%, China 9.9%, Thailand 5.6%, Taiwan 5.5%, South Korea 5%, Germany 4.5%, Indonesia 4%
<b>Current Account Balance (2005E)</b>	\$18.8 billion

### Energy Overview

<b>Minister of Energy, Communications, and Multimedia</b>	Leo Moggie
<b>Proven Oil Reserves (January 1, 2006E)</b>	3 billion barrels
<b>Oil Production (2005E)</b>	857.5 thousand barrels per day, of which 87% was crude oil.
<b>Oil Consumption (2005E)</b>	521.3 thousand barrels per day
<b>Crude Oil Distillation Capacity (2006E)</b>	544.8 thousand barrels per day
<b>Proven Natural Gas Reserves (January 1, 2006E)</b>	75 trillion cubic feet

<b>Natural Gas Production (2003E)</b>	1.9 trillion cubic feet
<b>Natural Gas Consumption (2003E)</b>	1,007.5 billion cubic feet
<b>Recoverable Coal Reserves (2003E)</b>	4.4 million short tons
<b>Coal Production (2003E)</b>	0.4 million short tons
<b>Coal Consumption (2003E)</b>	6.2 million short tons
<b>Electricity Installed Capacity (2003E)</b>	15.7 gigawatts
<b>Electricity Production (2003E)</b>	79.3 billion kilowatt hours
<b>Electricity Consumption (2003E)</b>	73.6 billion kilowatt hours
<b>Total Energy Consumption (2003E)</b>	2.3 quadrillion Btus*, of which Oil (45%), Natural Gas (44%), Coal (7%), Hydroelectricity (3%), Nuclear (0%), Other Renewables (0%)
<b>Total Per Capita Energy Consumption (2003E)</b>	94.8 million Btus
<b>Energy Intensity (2003E)</b>	10,393.1 Btu per \$2000-PPP**

## Environmental Overview

<b>Energy-Related Carbon Dioxide Emissions (2003E)</b>	141.9 million metric tons, of which Oil (50%), Natural Gas (39%), Coal (10%)
<b>Per-Capita, Energy-Related Carbon Dioxide Emissions (2003E)</b>	5.8 metric tons
<b>Carbon Dioxide Intensity (2003E)</b>	0.6 Metric tons per thousand \$2000-PPP**
<b>Environmental Issues</b>	air pollution from industrial and vehicular emissions; water pollution from raw sewage; deforestation; smoke/haze from Indonesian forest fires
<b>Major Environmental Agreements</b>	party to: Biodiversity, Climate Change, Climate Change-Kyoto Protocol, Desertification, Endangered Species, Hazardous Wastes, Law of the Sea, Marine Life Conservation, Ozone Layer Protection, Ship Pollution, Tropical Timber 83, Tropical Timber 94, Wetlands

## Oil and Gas Industry

<b>Organization</b>	Malaysia 's national petroleum corporation, Petroliaam Nasional Berhad (Petronas), was formed in 1974. Petronas controls oil production through partnerships with ExxonMobil (Esso Production Malaysia) and Shell (Sabah Shell Petroleum, Sarawak Shell Berhad, and Sarawak Shell/Petronas Carigali)
<b>Foreign Company Involvement</b>	BP Amoco, Conoco, Enron, ExxonMobil, Lundin Oil, Murphy Oil, Nippon Mitsubishi Oil, Occidental, Shell, Texaco, Triton
<b>Major Oil Fields</b>	Bekok, Bokor, Erb West, Bunga Kekwa, Guntong, Kepong, Kinabalu Pulau, Samarang, Seligi, Semangkok, Tapis, Temana, Tiong
<b>Major Natural Gas Fields</b>	Bedong, Bintang, Damar, Jerneh, Laho, Lawit, Noring, Pilog, Resak, Telok, Tujoh
<b>Major Refineries</b>	Port Dickson-Shell (155,000), Melaka I (92,832), Melaka II (126,000), Kerteh-Petronas (40,000), Port Dickson-Esso (86,000), Lutong-Shell (45,000)

\* The total energy consumption statistic includes petroleum, dry natural gas, coal, net hydro, nuclear, geothermal, solar, wind, wood and waste electric power. The renewable energy consumption statistic is based on International Energy Agency (IEA) data and includes hydropower, solar, wind, tide, geothermal, solid biomass and animal products, biomass gas and liquids, industrial and municipal wastes. Sectoral shares of energy consumption and carbon emissions are also based on IEA data.

\*\*GDP figures from OECD estimates based on purchasing power parity (PPP) exchange rates.

## Links

### EIA Links

[EIA - Country Information on Malaysia](#)

### U.S. Government

[CIA World Factbook - Malaysia](#)

[U.S. Department of Energy - Office of Fossil Energy - Malaysia](#)

[U.S. State Department Consular Information Sheet - Malaysia](#)

[U.S. State Department Country Commercial Guide - Malaysia](#)

[U.S. Embassy in Malaysia](#)

### Other Links

[Malaysia's Department of the Environment, in the Ministry of Science, Technology, and the Environment](#)

[Permanent Mission of Malaysia to the United Nations](#)

[Petronas](#)

[New Straits Times](#)

## Sources

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World Gas Intelligence

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